

HGS-X Series

HGS-10X, HGS-12X and HGS-15X

Since 1983, when Velodyne revolutionized subwoofers with its patented High Gain Servo™ technology, reviewers and consumers have praised their superior performance. The tradition continues with the HGS-X Series – delivering Velodyne’s world-famous powerful, accurate, low distortion bass from incredibly small, easy to place or custom install cabinets. The High Gain Servo system controls Velodyne’s unique Dual Tandem Voice Coil drivers powered by a Class D amplifier that delivers more than 3000 watts of peak power. Without question, the HGS-X Series are the most powerful, precise and affordable servo-controlled subwoofers on the market today.



HGS-15X

Features

- High Gain Servo control for accuracy
 - A flexible high quality crossover system
 - Selectable subsonic filter
 - Infrared remote control (optional)
 - Adjustable low-pass filter
 - Subwoofer Direct crossover by-pass
 - Phase adjustment
-

ERS™ Amps - Unprecedented Power



To power these incredible subwoofers, Velodyne uses a “digital” switching amplifier, capable of producing 1250 watts RMS and over 3000 watts peak. Unlike conventional designs, the HGS-X Series incorporates Velodyne’s patented Energy Recovery System that converts over 95% of the incoming current to usable power with minimal heat buildup.

High Gain Servo - Lowest Distortion

Only Velodyne’s High Gain Servo technology can deliver less than 1% distortion all the way down to 20 Hz and below. This patented Velodyne technology utilizes a tiny sealed accelerometer that is mounted to the voice coil, measuring the actual motion of the speaker cone 3,500 times a second. The data is fed into a processor where it is compared to the input signal and any discrepancies are corrected instantaneously. The distortion that produces the boomy, muddy bass of competitive subwoofers is virtually eliminated in the HGS-X Series. The result is deep, dynamic bass that you can actually feel.



HGS-12X

Dual Tandem Voice Coil - Linear Motion



Non-linear cone movement causes a high level of mechanical distortion and sloppy, muddy bass performance. Velodyne conquers this common cause of distortion with its unique Dual Tandem Voice Coil design. This system creates a linear excursion of 1¼" peak-to-peak with a 2" maximum. A two section magnetic structure in a push-pull configuration with a two segment voice coil wound out of phase generates less than half the distortion of conventional motor designs, and is capable of four times the heat dissipation, contributing to Velodyne's distinctive tight, accurate, low distortion sound.

Specifications	HGS-10X	HGS-12X	HGS-15X
Amplifier - Class D	1250 watts RMS/ 3000 watts peak	1250 watts RMS/ 3000 watts peak	1250 watts RMS/ 3000 watts peak
Woofers	10" forward firing (8" piston diameter)	12" forward firing (9.7" piston diameter)	15" forward firing (12.7" piston diameter)
Voice Coil	3" Dual Tandem push-pull	3" Dual Tandem push-pull	3" Dual Tandem push-pull
Excursion	2" maximum	2" maximum	2" maximum
Magnet Structure	310 oz (19.3 lbs.)	310 oz (19.3 lbs.)	380 oz (24 lbs.)
Cone	Kevlar reinforced	Kevlar reinforced	Kevlar reinforced
High Pass Crossover	passive 80 Hz (6dB/octave)	passive 80 (6 dB/octave)	passive 80/100 Hz (6 dB/octave)
Low Pass Crossover	40 Hz-120 Hz (12 dB/octave initial, 48 dB/octave ultimate)	40 Hz-120 Hz (12 dB/octave initial, 48 dB/octave ultimate)	40 Hz-120 Hz (12 dB/octave initial, 48 dB/octave ultimate)
Crossover By-pass	Yes - Subwoofer Direct	Yes - Subwoofer Direct	Yes - Subwoofer Direct
Anti-Clipping Circuit	Yes	Yes	Yes
Inputs and Outputs	Line Level	Line Level	Line and Speaker Level
Frequency Response	20-120 Hz +/- 3 dB	20-120 Hz +/- 3 dB	18-120 Hz +/- 3 dB
Subsonic Filter	20 Hz or 35 Hz	20 Hz or 35 Hz	15 Hz or 35 Hz
Phase	0° or 180°	0° or 180°	0° or 180°
Auto On/Off	Yes	Yes	Yes
High Gain Servo	Yes	Yes	Yes
Distortion	Less than 1%	Less than 1%	Less than .5%
Remote Control	Optional	Optional	Optional
Weight	45 lbs. (20 kg)	60 lbs. (27 kg)	95 lbs. (43 kg)
Cabinet: (H/W/D) (cm) (includes grill & feet)	11½" x 11" x 11" 28.75 x 27.5 x 27.5	14¾" x 14" x 15¾" 37 x 35 x 39	19 7/8" x 18" x 17 7/8" 49 x 45 x 45

Velodyne Acoustics, Inc.
345 Digital Drive
Morgan Hill, CA 95037
(408) 465-2800
www.velodyne.com

Copyright ©2004 Velodyne Acoustics, Inc.
Specifications subject to change without notice.
Other trademarks or registered trademarks are
property of their respective owners.
April 2004, Rev A